

REMARKS/ARGUMENTS

Reconsideration of this application is respectfully requested.

In response to formality-based claim objections, the claims have been reviewed and amended above so as to obviate each of the Examiner's stated grounds for objection.

Accordingly, all formal issues are now believed to have been resolved in the applicant's favor.

The continued rejection of claims 1-8 under 35 U.S.C. §102 as allegedly anticipated by Nakamura '031 is again respectfully traversed.

The claims have been further amended above so as to make it even more clear that applicant's claimed invention relates to assigning packet transmission priority -- and not to some internal switch algorithm for filling an address cache (sub-table) involved in merely setting up messaging routing connections as the Nakamura teaching is directed. References to routing tables and the like have been deleted so as to avoid confusion -- because applicant's invention actually has nothing to do with such conventional switch routing tables.

In setting up internal switch routing table entries, Nakamura tries to determine addresses that are most likely to be re-used in future packet switching operations. For example, addresses detected at the beginning of a messaging connection are surely to be re-used until all the related packets of that messaging session have been processed. In an attempt to expedite the routing process, such surely-to-be re-used addresses are stored in a special sub-table of the routing table.

In effect, the sub-table is an address cache -- thereby effecting a cost savings since only the more limited cache memory needs to be effected in an expensive fast memory lookup circuit.

As with any type of data cache, there has to be some algorithm for deciding which members of the cache should be replaced else the cache will grow without bound. It is only in this context of maintaining a proper address routing table (including its sub-table or cache) that Nakamura assigns a higher "priority" to some addresses than others. Such teaching has nothing to do with assigning any packet transmission priority among commonly addressed packets. Indeed, Nakamura's teaching does not indicate that any packet of a given TCT/IP session would have any higher transmission priority than any other.

By contrast, the applicant's invention is described throughout the specification as being directed towards minimizing the likelihood of TCP "control" packets not reaching their destination by allocating a higher quality of service (priority) transmission rating to the "control" packets -- while leaving the other or "data" packets controlled thereby at their usual service level (priority). For example, if a single acknowledgement packet at the end of a TCP/IP communication session is lost, then the entirety of the communication session will have to be repeated involving numerous packet re-transmissions that may well have already been earlier successfully received. In an attempt to avoid such an unfortunate circumstance, the applicant assigns a higher packet transmission priority to "control" packets (e.g., within the switch logic that assigns DSCP (Differential Services Control Point) to that packet when any flag other than PSH is set). In this way, certain "control" packets are given an alternative higher transmission priority as compared to the "data" packets that they control within a TCP/IP session.

As pointed out by the applicant in the specification at page 5, lines 14 et seq., allocating a transit priority using a DSCP is itself known. However, the applicant now proposes and claims an improved system wherein the packet transmission priority of a TCP "control" packet is enhanced as compared to the transmission priority of "other" TCP packets. As spelled out in more detail at some of applicant's more detailed claims, one embodiment of applicant's invention considers a TCP packet to be a "control" packet if any flag other than a PSH flag bit has been set.

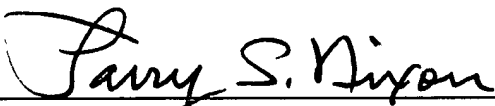
Using applicant's invention, particular "control" messages can thus be designated so as to have a higher transmission priority when an opportunity for transmission exists. This is a completely different kind of "priority" than the address cache-filling algorithm used by Nakamura for filling his fast-memory sub-table (cache) with packet addresses likely to be re-used in the future. Indeed, so far as can be ascertained from Nakamura's teaching, all packets in a given TCP/IP session would have equal transmission priorities -- precisely what the applicant's claimed invention avoids.

Accordingly, this entire application is now believed to be in allowable condition and a formal Notice to that effect is respectfully solicited.

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Respectfully submitted,

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